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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,820	02/03/2004	Koichiro Tanaka	740756-2709	9528

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NIXON PEABODY, LLP  
401 9TH STREET, NW  
SUITE 900  
WASHINGTON, DC 20004-2128

EXAMINER
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HEINRICH, SAMUEL M

ART UNIT	PAPER NUMBER
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1725

MAIL DATE	DELIVERY MODE
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07/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/769,820

Applicant(s)

TANAKA, KOICHIRO

Examiner

Samuel M. Heinrich

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 31-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 31-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/170,739.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

### DETAILED ACTION

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4,724,222 to Feldman. Feldman describes (column 6, lines 11-19) a concave wafer chuck used with an energy beam apparatus. The intended use does not impart patentability to the claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made:

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of USPN 5,907,770 to Yamazaki et al, USPN 4,724,222 to Feldman, USPN 5,865,118 to Fromson et al, JP407260598A, and JP404241373A. Yamazaki et al show (Front Page) concave glass which is used to support a silicon film in a crystallization process. Feldman describes (column 6, lines 11-19) a concave wafer chuck used with an energy beam apparatus. Fromson et al show (Front Page) an arcuate concave imaging platen 63. JP407260598A shows (Figures 1, 2, 7, and 9) an arcuate concave stage. A stage having a particular size of a side length of one meter would have been an obvious modification depending on an intended use with a particularly sized work piece.

Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,724,222 to Feldman in view of USPN 5,733,182 to Muramatsu et al. Feldman describes (column 6, lines 11-19) a concave wafer chuck used with an energy beam

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apparatus. Muramatsu et al show (Figures 2A and 2B) adjustable pin supports. The use of different length pins in the Feldman chuck would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because it provides more adjustment depending on the workpiece size and shape.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of USPN 5,907,770 to Yamazaki et al and in view of USPN 4,724,222 to Feldman. AAPA discloses (in the Specification, the "Description of the Related Art", and Figures 2 and 3) well known laser annealing apparatus, but do not describe the means for expanding and condensing the beam or the cylindrical shaped stage. Yamazaki et al show (Front Page) concave glass which is used to support a silicon film in a crystallization process. Yamazaki et al describe an excimer laser. Yamazaki et al show (Figures 13 and 14) well known cylindrical lens means for expanding and condensing the beam and the use of well known beam modification apparatus would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the means for expanding and condensing provide energy for annealing silicon. Feldman describes (column 6, lines 11-19) a concave wafer chuck used with an energy beam apparatus. The use of the concave chuck surface would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the curved surface provides precise relationship with a reference surface for high-resolution patterning techniques. With respect to the particular claimed equations, the ranges disclosed in the instant Specification (DETX (51), [0104]-[0105]), focal length ( $f_2$ ) parameters are listed from

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2200 mm to 8800 mm and range of radius of curvature parameters are listed from 9000 mm to infinity. The prior art apparatus can be adjusted to fall within this range and the use of a concave wafer chuck therewith would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art in order to be able to make high-resolution patterns.

Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of USPN 5,907,770 to Yamazaki et al and in view of USPN 4,724,222 to Feldman as applied to claims 4-6 and further in view of USPN 5,733,182 to Muramatsu et al. Feldman describes (column 6, lines 11-19) a concave wafer chuck used with an energy beam apparatus. Muramatsu et al show (Figures 2A and 2B) adjustable pin supports. The use of different length pins in the Feldman chuck would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because it provides more adjustment depending on the workpiece size and shape.

### ***Response to Arguments***

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

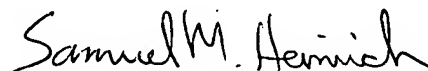
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art pertains to work holders.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel M. Heinrich whose telephone number is 571-272-1175. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. Johnson can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Samuel M Heinrich  
Primary Examiner  
Art Unit 1725

SMH